

Aviation Data Management and Control System

The ADMACS Laboratory provides the capability to develop, test, and provide life-cycle support for a data management system for air and flight operations and aviation work centers. The system offers a real-time, fault tolerant (redundant), configuration managed, tactical data management system with open system architecture. It also provides multi-source data fusion and distribution; automates the input, collection, processing, distribution, and display of air operations and aviation data information; standardizes the arrangement of air operations and aviation work centers, and allows subsystems to operate in a standalone/autonomous or distributed mode. The system will be web-enabled.

Engineers and software developers in the Aviation Data Management and Control System (ADMACS) Laboratory worked with their customers from requirements definition to system implementation to develop an information management system that tracks aircraft and helicopter status during recovery, launch, and flight deck operations on board carriers. The mission critical nature of the system requires high reliability, accurate information, and a verifiable audit trail.

The laboratory provides cradle-to-grave support for systems it designs including:

- Requirements definition
- Software development
- Network development
- Installation
- Logistics
- In-service support

Of interest to potential users of the ADMACS Laboratory is the fact that the software developers work in a secure environment. They also have access to the API Modeling and



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Simulation Laboratory, which allows them to rapidly develop software prototypes. The ADMACS Laboratory has been rated at the Software Engineering Institute's (SEI's) Maturity level 3 on the Software-Capability Maturity Model (SW-CMM).

Partnering Opportunities

Several mechanisms exist for partnering with NAVAIR Lakehurst. These include cooperative research and development agreements (CRADAs), commercial services agreements (CSAs), and education partnership agreements (EPAs). Under a CRADA, Lakehurst engineers and scientists work cooperatively with their peers in industry or academia on mutually beneficial research and development. The Navy has been given statutory authorization, via CSAs, to use Navy facilities to perform specific types of work for private parties. EPAs allow collaboration between NAVAIR Lakehurst and educational institutions.

Potential Applications

Experienced software developers in the ADMACS Laboratory provide the ability to capture their customers' requirements and translate them into information systems that will meet any customer's needs. The expertise used to design, develop, and track the status of aircraft on board a carrier can be readily transitioned to passenger or cargo planes; shipping and transport companies; or specific applications such as tracking chemical shipments. Because of the core nature of the laboratory's main mission (providing data management support for aircraft carriers), potential customers can expect ADMACS personnel to be available long term for ongoing life-cycle support of whatever data management system it develops.

For More Information

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NAVAIR Lakehurst's Aircraft Platform Interface Facility was opened in August 2002. This 66,000-square-foot research and development facility supports the Navy's aircraft launch and recovery and support equipment missions. The technical capabilities covered by the 14 laboratories in this facility include power control systems; modeling, simulation, and data analysis/management; optical and lighting systems; integrated diagnostics; component evaluation; and applied technology. The synergism provided by collocating these teams of engineers, scientists, and technicians in one building further enhances this state-of-the-art facility.

NAVAIR Lakehurst researches, develops, tests, and procures aircraft launch and recovery systems and support equipment for Navy and Marine Corps aviation.



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